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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/26/2003

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EXAMINER

BAUM, STUART F

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

03/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. The amendment file 12/14/2007 has been entered.
2. Claims 17-23 and 38-46 are pending.

Claims 1-16 and 24-37 have been canceled.

Claims 40-46 have been newly added and are drawn to the elected invention.
3. Claims 17-23 and 38-46, including SEQ ID NO:75 and 79 are examined in the present office action.
4. Rejections and objections not set forth below are withdrawn.
5. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 38 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection includes dependent claims.

Claim 38 is indefinite because it is unclear how a nucleic acid having 95% identity to SEQ ID NO:75 can also comprise SEQ ID NO:75.

New Matter

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 17-23 and 40-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims have been amended to recite “A transgenic plant having an altered response to vernalization, wherein the transgenic plant comprises a nucleic acid having at least 95% identity to SEQ ID NO:75”. Applicants point to page 44 of the specification (page 4 of Remarks, 2nd paragraph) but support for the phrase in the instant specification was not found. Upon a cursory search of the specification, support could not be found. Applicants are required to point to support for “A transgenic plant having an altered response to vernalization, wherein the transgenic plant comprises a nucleic acid having at least 95% identity to SEQ ID NO:75” or to amend the claims to delete the NEW MATTER.

Written Description

8. Claims 17-23 and 38-39 remain rejected and new claims 40-46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This

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rejection is maintained for the reasons of record set forth in the Official action mailed 6/15/2007.

Applicant's arguments filed 12/14/2007 have been fully considered but they are not persuasive.

Applicants contend amended claims 17-23 have been amended to transgenic plants having an altered response to vernalization and transgenic seeds thereof (page 5 of Remarks, 2nd paragraph). Applicants contend new claims 40-44 are also directed to transgenic plants having an altered response to vernalization. Applicants contend the amended and new claims meet the requirement for a disclosure of a correlation between function and structure (*Ibid*).

The Office contends Applicants' claims do not recite a function for the genus of sequences that are recited in the claims. Applicants only recite that a transgenic plant having an altered response to vernalization comprises the claimed genus of sequences. Applicants have not recited a specific function associated with the claimed genus. Applicants are directed to Example 14 of the Written Description Guidelines for a more thorough discussion of what is being requested to satisfy the written description requirement. It is noted that Example 14 recites a claim drawn to a nucleic acid and not to a plant comprising a nucleic acid.

Enablement

9. Claims 17-23 and 38-39 remain rejected and new claims 40-46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 6/15/2007. Applicant's arguments filed 12/14/2007 have been fully considered but they are not persuasive.

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Applicants contend amended claims 17-23 have been amended to transgenic plants having an altered response to vernalization and transgenic seeds thereof (page 5 of Remarks, 5th paragraph). Applicants contend new claims 40-44 are also directed to transgenic plants having an altered response to vernalization.

The Office contends Applicants have not disclosed any structure/function relationship for the claimed genus of nucleic acid molecules. Applicants have also not disclosed which amino acids of the claimed genus can be deleted or substituted without changing the activity of the encoded proteins. Applicants have also not taught by way of disclosure or example that a nucleic acid having 95% identity to SEQ ID NO:75 or 79 or a sequence comprising SEQ ID NO:75 or 79 will produce a plant having an altered response to vernalization. Given the unpredictability in the art as stated in the office action mailed 6/15/2007, and given the breadth of the claims and the lack of disclosure as stated above, undue trial and error experimentation would be required by one of skill in the art to make and/or use the claimed invention.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 19, 21, 23, 41 and 43 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 19, 21, 23, 41 and 43 are drawn to a seed of the transformed plant. Due to Mendelian inheritance of genes, a single gene introduced into a parent plant would only be transferred at most to half the male gametes and half the female gametes. This translates into

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only three quarters of the progeny having at least a single copy of the transgene and one quarter of the progeny would not carry a copy of the transgene. Given that there is no indication that there would be any other distinguishable characteristics of the claimed progeny (seeds), it is unclear whether the claimed seeds would be distinguishable from seeds that would occur in nature. See *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 76 USPQ 280 (1948), and *In re Bergy, Coats, and Malik* 195 USPQ 344, (CCPA) 1977. The amendment of the claims to recite that the seeds comprise the construct that was introduced into the parent would overcome the rejection.

11. Claims 17-23 and 38-46 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest an isolated polynucleotide of SEQ ID NO:75 or 79, or an isolated nucleic acid comprising a sequence having at least 95% identity to SEQ ID NO:75 or 79; vector, cell, and transgenic plant comprising said nucleic acid.

12. No claims are allowed.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Stuart F. Baum/
Stuart F. Baum Ph.D.
Primary Examiner
Art Unit 1638
March 10, 2008

<div>Application Number</div> <div></div>	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/723,947	DUBCOVSKY ET AL.	
	Examiner	Art Unit	
	STUART F. BAUM	1638	